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EXAMINER	
PATEL, HARESH N	

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 11/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/751,105	Applicant(s) EYLON ET AL.	
	Examiner Haresh Patel	Art Unit 2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-52 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-52 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 28 December 2000 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,7,9 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. Claims 1-52 are presented for examination.

Priority

2. Applicant's claim for domestic priority under 35 U.S.C. 119(e), 120 and/or 121 is acknowledged.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-52 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-46 of U.S. Patent No. 6,574,618. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent teaches all the limitations as disclosed such that the application files are broken up into streamlets corresponding generally to various portions of the application files and the streamlets are delivered to the client by the server, using a predictive algorithm.

Specification

4. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
(e) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(f) BRIEF SUMMARY OF THE INVENTION.
(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(h) DETAILED DESCRIPTION OF THE INVENTION.
(i) CLAIM OR CLAIMS (commencing on a separate sheet).
(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The disclosure is objected. Some of the informalities are:

i. "DETAILED DESCRIPTION OF THE INVENTION" section contains significant amount of known prior art. All known prior art contents from the

"DETAILED DESCRIPTION OF THE INVENTION" section needs to be moved into the "Description of Related Art" sub-section of the "BACKGROUND OF THE INVENTION" section.

Appropriate correction is required.

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Improved system and method to send predicted streamlets to a client device".

Drawings

6. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

7. An initialed and dated copies of Applicant's IDS form 1449, Paper No. 3, 7 and 9, is attached to the instant Office action.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 13-15, 17, 18, 33, 34, 36, 37, 47-49, 51, 52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "data map" in claims 13-15, 17, 18, 33, 34, 36, 37, 47-49, 51, 52 is a relative term, which renders the claim indefinite.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1, 19, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMoney 6,438,630 in view of Wang et. al. 6,499,060 (Hereafter Wang).

As per claims 1, 19 and 38, DeMoney teaches the following.

a system for streaming a software application to a client comprising,

a method for streaming a software application comprising the steps of,

a computer program product stored on a computer readable medium, the product comprising a computer program for configuring a server with an application library having application files stored therein to stream the application to a client, the computer program comprising code to configure the server to:

an application library having application files stored therein (e.g., a distributed multimedia file system employing a number of video servers and files systems, Each storage

system 204 may include a number of RAID systems, Each video server 202 may also connect to its own local file system or tape library, other storage systems, such as a tape library, may be accessible to the system on the fibre channel. Clients may request multimedia streams to be sent on transmission network 208, col. 9, line 65 – col. 10, line 65),

a streaming manager configured to send the application files to a client as a plurality of streamlets (e.g., Each media stream manager may be configured to provide a guaranteed maximum media stream rate to its associated media stream client, abstract), each streamlet corresponding to a particular data block in a respective application file (e.g., each buffer is consumed by its associated media stream client one after another in a circular order. Each buffer may be equally sized to hold one block of data, where data is accessed in the storage systems according to a block, col. 1, line 5 – col. 8, line 23).

However, DeMoney does not specifically teach prediction model to predict the streaming blocks.

Wang teaches the following.

a prediction model and a streaming prediction engine configured to identify at least one streamlet which is predicted to be most appropriate to send to a given client at a particular time in accordance with the prediction model (e.g., An improved loss recovery method for coding streaming media classifies each data unit in the media stream as an independent data unit (I unit), a remotely predicted unit (R unit) or a predicted data unit (P unit). Each of these units is organized into independent segments having an I unit, multiple P units and R units interspersed among the P units, abstract, col. 1, lines 48-61, predictor, prediction unit, figure 3),

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of DeMoney with the teachings of Wang in order to facilitate streaming of predicted streamlets from the server to the client device on the internet.

11. Claims 2, 3, 5, 20, 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMoney in view of Wang.

As per claims 2, 3, 5, 20, 21 and 24, DeMoney teaches the following.

each streamlet corresponds to a file data block having a size equal to a code page size used during file reads by an operating system expected to be present on a client system, the data block size is four kilobytes, the predefined length comprises a code page size used during file reads by an operating system expected to be present on a client system (e.g., data is transferred to or from the storage systems in a constant block size. In a preferred embodiment a block size of 256 kilobytes may be chosen. The video stream manager may provide for configuration of the block size during system initiation or configuration. The fixed block size mechanism ensures that no external fragmentation of storage occurs and that internal fragmentation occurs only at the last block of the file (since a file is unlikely to end exactly at a block boundary, col. 10, lines 40 - 65),

However, DeMoney does not specifically mention about the streamlet size of 4 kilobytes, as the page size used for the file reads by an operating system at the client device. Official Notice" is taken that both the concept and advantages of providing the streamlet size of 4 kilobytes is well known and expected in the art and would be an obvious design choice for the

selection of streamlet size equivalent of the page size used for the file reads by an operating system at the client device.

12. Claims 4, 22, 23, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMoney in view of Wang.

As per claims 4, 22, 23, 39 and 40, DeMoney teaches the following.

the application files are stored in the application library as preprocessed streamlets (e.g., Various movies may be stored by the server and distributed to users upon request. Video-on-demand or video delivery systems may enable a plurality of users or viewers to selectively watch movies or other audio/video sequences which are stored on one or more video servers or media servers, col. 1, line 5 - col. 8, line 23), each streamlet corresponding to a data block in a particular application file at a particular offset and having a predefined length (e.g., Another parameter may be configured to set the length of a seek reorder queue that orders storage system requests according to their physical storage address, the size of the data blocks is varied between different streams according to the rate required for a particular stream, col. 1, line 5 - col. 8, line 23),

dividing the application files into streamlets prior to initiation of a streaming session (e.g., Determination of the appropriate number of buffers in the buffer ring may be done empirically. This may be done by running a collection of guaranteed rate streams, all contracted for the same rate. The rate is chosen so that the collection of streams exactly consumes the entire admission bandwidth. All streams are initiated against the scheduler simultaneously, col. 1, line 5 - col. 8, line 23).

13. Claims 6 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMoney in view of Wang.

As per claims 6, 25, DeMoney teaches the following.

each preprocessed streamlet is compressed (e.g., multimedia systems use various types of video compression algorithms to reduce the amount of necessary storage and data transfer bandwidth, col. 1, lines 48 – 61).

14. Claims 7-9, 26-28, 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMoney in view of Wang.

As per claims 7-9, 26-28, 41-43, DeMoney teaches the following.

the streaming manager is configured to send the client upon a first initiation of the streaming application a file structure specification of the application files, the streaming manager is further configured to send the client upon the first initiation of the streaming application a set of streamlets comprising at least those streamlets containing the portions of the application required to enable execution of the application to be initiated, the application library has a startup block comprising the file structure specification and set of streamlets stored therein (e.g., Another source of file requests may be the file system itself. These requests may include requests for metadata required to support the various data streams (e.g. blocks that holds lists of blocks to stream, such as indirect blocks). These type of metadata requests may be time critical in that streaming will stop if a stream pointer block (indirect block) pointing to the next data block to the stream is unavailable. Thus, request for time critical metadata also carry deadlines

and may be scheduled directly along with streaming data requests in the guaranteed rate or deadline queue. The file system constantly monitors its progress by means of the current indirect block. At an appropriate threshold it calculates a deadline and schedules the fetch of the next indirect block from the storage system. Other metadata requests may be non-critical such as other types of file management and read and write operations unrelated to streaming (e.g. listing files in the file system, col. 11, line 1 – col. 15, line 65).

15. Claims 10, 29 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMoney and Wang in view of Chen et. al. 6,412,004 (Hereinafter Chen)

DeMoney and Wang does not specifically teach the limitations of claims 10, 29 and 44.

Chen teaches the following.

the streaming manager is further configured to install streaming environment support software on the client prior to initiating an application streaming processes (e.g., The metaserver can manage both live and on-demand video streams. If a client computer wishes to watch a live event or an on-demand content, it should be prepared to wait until the event actually starts or until the tape with the requested multimedia content is installed into the multimedia server, col. 7, line 4 – col. 20, line 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of DeMoney and Wang with the teachings of Wang in order to facilitate streaming environment for the streaming application at the client device before the application is executed.

16. Claims 11-12, 16, 30-31, 35 and 45-46, 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMoney in view of Wang.

DeMoney does not specifically teach the limitations of claims 11-12, 16, 30-31, 35 and 45-46, 50.

Wang teaches the following.

a differential prediction model associated with the client, the prediction engine configured to make streamlet predictions for the client in accordance with the default prediction model and the respective differential prediction model, the streaming manager is configured to, upon receipt of application usage tracking information from the client, update at least one of the differential prediction model for the client and the prediction model, the streaming manager is further configured to, upon receipt of the streamlet request from the client, reposition the prediction engine in the default prediction model in accordance with the requested streamlet (e.g., An improved loss recovery method for coding streaming media classifies each data unit in the media stream as an independent data unit (I unit), a remotely predicted unit (R unit) or a predicted data unit (P unit). Each of these units is organized into independent segments having an I unit, multiple P units and R units interspersed among the P units, abstract, col. 1, lines 48-61, predictor, prediction unit, figure 3),

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of DeMoney with the teachings of Wang in order to facilitate streaming of predicted streamlets from the server to the client device on the internet.

17. Claims 13-15, 17, 18, 32-34, 36-37, 47-49, 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeMoney and Wang in view of Stumm 5,768,528.

DeMoney and Wang does not specifically teach the limitations of claims 13-15, 17, 18, 32-34, 36-37, 47-49, 51-52.

Stumm teaches the following.

an application status repository comprising a data map for each active client, the data map generally indicating the streamlets which are present at the respective client (e.g., The database server maintains a schedule of events file adapted to contain information relating to predetermined downloading schedules to the subscribers of the database server. The schedule of events file or the relevant portions of it are then transmitted to individual subscribers so that requests for information can be launched from the subscribers terminals at a predetermined time in accordance with the schedule of event file, abstract, receiving from each subscriber an information request in accordance with the schedule of events file and a list of existing files in the subscriber's database including the file names, file sizes and corresponding file identification code, col. 1 line 12 – col. 2, line 45),

determine if the data map indicates that the client already has the requested streamlet; request an updated data map from the client and replace the data map with a returned updated map; retrieve the requested streamlet from the application library; and update the data map upon a successful transmission of the requested streamlet to the client, replace the data map in the application status repository for the client with the data map received from the client, compare the data map in the application status repository for the client with the data map received from the client and log mismatches (e.g., receiving from each subscriber an information request in

accordance with the schedule of events file and a list of existing files in the subscriber's database including the file names, file sizes and corresponding file identification code; transmitting to the subscriber a set of predetermined data files as authorized by a corresponding one of the publishers, including each file's name, size and identification code in response to the information request from each one of the subscribers, receiving from each subscriber the name of files that were not properly received by the subscriber along with the size of the portion of the file received by the subscriber and the CRC code of the portion received by the subscriber; calculating the CRC code of the portion of the file received from said subscriber, comparing the CRC code of the portion of the file received by the subscriber with the calculated CRC code of the portion of the file received from the subscriber; and transmitting the remaining portion of the file to the subscriber when the CRC codes are equal, receiving from the subscribers their corresponding local time zones and responsive thereto, transmitting a corresponding offset time necessary to synchronize the subscriber's local time with a publisher's reference time, such that all scheduled events take place at the corresponding publisher's reference time, downloading data files from a server system to a subscriber's computer system, wherein the data files originated by a plurality of publishers, the method comprises the steps of: maintaining a schedule of events file containing a time schedule for downloading the data files; maintaining a log file for tracking the success and failure of the events; transmitting an information request to the server system when the event is launched at a scheduled time; receiving a group of files corresponding to a publisher from the server system, and their corresponding filesizes and CRC codes in response to the information request; and tracking the log file to determine whether the last event scheduled was completed successfully, col. 1 line 12 – col. 2, line 45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of DeMoney and Wang with the teachings of Stumm in order to utilize the previously streamed data at the client device.

Conclusion

18. The present application is a continuation-in part of application number 09/120,575, which does not contain all the claimed invention.

19. Examiner has found numerous arts related to the disclosed subject matter. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See Form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haresh Patel whose telephone number is (703) 605-5234. The examiner can normally be reached on Monday, Tuesday, Thursday and Friday from 10:00 am to 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee, can be reached at (703) 305-8498.

The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 306-5404.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Haresh Patel

November 2, 2003.

JOHN FOLLANSBEE
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